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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/757,269	01/08/2001	David K. Umberger	10003127-1	6246

7590   01/27/2005

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EXAMINER
BANANKHAH, MAJID A

ART UNIT	PAPER NUMBER
2127	

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/757,269	UMBERGER ET AL.
	Examiner	Art Unit	
	Majid A Banankhah	2127	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*01 September 2004*</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5 and 7-20* is/are rejected.

7)☐ Claim(s) *2 and 6* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to Amendment filed September 01, 2004. Claims 1-20
are considered for examination.

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the
basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito (U.S. Pat.
No. 6,578,064, hereafter Saito).

Per claims 1, Saito teaches: a method for optimizing an efficiency of a data processing
system (the system of Saito, distributed computing system, col. 3, line 38-40) the method
comprising the steps of:
identifying a plurality of operations awaiting execution on at least one service component of said
data processing system (load of the computer consisting of programs, col.4, lines 10-17);
assigning an initial priority ranking to each of said plurality of operations prior to run time
(corresponding priority level of processing, col. 4, line 10-17); and
dynamically, modifying said assigned initial priority rankings at run time to optimize efficiency
of said data processing system (priority level changing means for changing the priority level of a
program which executes the processing in accordance with a priority level indicated by the
priority level conversion means, col. 4, lines 14-17).

Per claim 2, the claim is rejected for the reasons stated in the rejection of claim 1, and further

determining a service demand placed upon each of the service components arising from

performance of said plurality of operations (selecting a computer for executing, col. 4, lines 61-

64);

estimating a utilization rate for each of the service components based on said determined service

demands, wherein said dynamically modifying includes adjusting said assigned initial priority

rankings at to substantially equalize said utilization rates of the service components (prediction

means for predicting a processing time, col. 5, lines 10-19, and).

Per claims 3-4, the system of teaches of teaches of internal and external operation to the service

components, and selecting one operation for execution from plurality of operations based on

utilization in col. 4, lines 61 to col. 5, lines 14. Further he teaches of directing one service

component to execute operation external to the service component, and based on utilization rate

being below-predetermined threshold (col. 4, line 65 to col. 5, line9).

Per claim 5, Saito teaches of adjusting priority ranking of the external operation in col. 6, lines

41-67.

3.   Following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102
of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject
matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art
to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 9-13, and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Saito as applied to claim 1-8 above, and further in view of Parks (U.S., Pat. No. 6,598,174,

hereafter Parks).

Claim 9 is rejected for the reasons stated in the rejection of claim 1-8, however, Saito fails to

teach of storage device having storage level, and a communication with the storage device.

However, the reference of parks teaches of a storage device such as RAID, and levels associated

with (col. 2, lines 24-47). He also teaches of assigning priority to levels of storage devices (col.

3, lines 15-27, and). The reference of Parks fails to reference assigning priority at run time

during data processing system. It would have been obvious for one ordinary skill in the art at the

time the invention was made to use the dynamic priority assignment of Saito in the environment

of priority storage system of Parks in order to increase efficiency and optimize performance.

Per claims 10-11, the reference of Park teaches of the limitation in col. 4, lines 9-26.

Per claim 12, Saito teaches of utilization rate in col. 4, lines 59-65.

Per claim 13, Saito teaches of performance demand and initial priority ranking in col. 4, lines

10-17.

Per claim 15, the system of Saito guarantees a minimum a minimum level of service (col. 5, lines

10-14).

Per claim 16, regarding the data transferring data block between the RAID and data migration

between levels of RAID, see Park col. 2, line 24-47 and col. 4 line 57 to col. 5, line 6.

Per claim 17, the reference of Park teaches of transfer work request in col. 6, lines 36-60.

Per claim 18, Park teaches of RAID storage device and transfer work request in col. 2, lines 24-47, and col. 6, lines 36-60.

Per claims 19-20, the reference of Saito teaches of modifying priority in 4, lines 51-45.

Per claim 20, the reference of Saito teaches of equalizing priority in col. 4, lines 61-65.

4.   Claims 6-8, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Majid A. Banankhah** whose telephone number is (571) **272-3770**. The examiner can normally be reached on Monday – Thursday, 8:00 AM – 4:00 PM.
        If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756.
        Information regarding the status of an application may be obtained from the patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

        Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is **(703) 305-9600**.

Maid Banankhah

1/21/05

MAJID BANANKHAH
PRIMARY EXAMINER